IN THE CLAIMS

Please cancel claims 1-90.

Please add new claims 91-142, as follows:

1   91.   A method to obtain information transmitted between a source station and a

2 destination station in a non broadcast multiple access network, comprising:

3   establishing a connection between the source station and a server for the destination

4 station, the server having a server cache containing the information;

5   transmitting a request packet having parameters relating to the information to the

6 server; and

7   receiving a reply packet containing the information from the server, the reply packet

8 matching the parameters of the request packet.

1   92.   The method of Claim 91 wherein the information comprises an internetwork

2 layer address of the destination station.

1   93.   The method of Claim 91 wherein the information comprises an instance of a

2 resource information.

1   94.   The method of Claim 93 wherein the resource information comprises a

2 resource availability and an upper layer address information.

1   95.   The method of Claim 92 further comprising:

2   caching the address in a source cache;

3   inserting the address in a data packet; and

4   forwarding the data packet to the destination station.

1   96.   The method of Claim 92 wherein the request packet and the reply packet are

2 instances of a protocol packet.

1   97.   The method of Claim 96 wherein the protocol packet comprises a fixed part

2 and a mandatory part.

1   98.   The method of Claim 96 wherein the protocol packet further comprises an
2   extensions part.

1   99.   The method of Claim 98 wherein the fixed part comprises at least one of a
2   type field specifying a packet type and an extension offset field specifying if the extension
3   part exists and a location of the extension part if the extension part exists.

1   100.   The method of Claim 99 wherein the fixed part further comprises at least one
2   of a link layer address field specifying a type of link layer addresses being carried, a protocol
3   field specifying a protocol being used, a packet length field specifying a length of the
4   protocol packet, a checksum field specifying a checksum value, a version field specifying a
5   version of the protocol, a type and length of source address field specifying a type and length
6   of a source NBMA address, and a type and length of source subaddress field specifying a type
7   and length of a source NBMA subaddress.

1   101.   The method of Claim 99 wherein the packet type is one of a resolution request
2   type, a resolution reply type, a registration request type, and a registration reply type.

1   102.   The method of Claim 101 wherein the request packet is one of a resolution
2   request packet and a registration request packet, the resolution and the registration request
3   packets corresponding to the resolution and registration request types, respectively.

1   103.   The method of Claim 101 wherein the reply packet is one of a resolution reply
2   packet and a registration reply packet, the resolution and the registration reply packets
3   corresponding to the resolution and registration reply types, respectively.

1   104.   The method of Claim 97 wherein the mandatory part comprises a common
2   header.

1   105.   The method of Claim 104 wherein the mandatory part further comprises at
2   least a client information entry (CIE).

1   106.   The method of Claim 104 wherein the common header comprises at least one

2   of a flag field specifying a flag and a request identification (ID) field specifying a request ID.

1   107.   The method of Claim 106 wherein the common header further comprises at

2   least one of a source NBMA address field specifying the source NBMA address, a source

3   NBMA subaddress field specifying the source NBMA subaddress, a source protocol address

4   field specifying a source protocol address of the source station, and a destination protocol

5   address field specifying a destination protocol address of one of the destination station and

6   the server.

1   108.   The method of Claim 105 wherein the CIE comprises at least one of a code

2   field specifying an acknowledgment of the request packet in the reply packet, a maximum

3   transmission unit field specifying a maximum transmission unit and a holding time field

4   specifying a holding time for which data in the CIE are valid.

1   109.   The method of Claim 108 wherein the CIE further comprises at least one of a

2   client address time and length field specifying a time and length of a client address

3   interpreted by the link layer address field in the fixed part, a client subaddress time and length

4   field specifying a time and length of a client subaddress interpreted by the link layer address

5   field in the fixed part, a client NBMA address field specifying a client NBMA address, a

6   client NBMA subaddress field specifying a client NBMA subaddress, and a client protocol

7   address field specifying a client internetworking layer address.

1   110.   The method of Claim 106 wherein the flag of the resolution request packet

2   comprises at least one of a station type specifying whether the source station is a router or a

3   host, a uniqueness value specifying that only a CIE matching the parameters and having the

4   same uniqueness value is included in the reply packet, and a guarantee value specifying that a

5   binding of the information is guaranteed stable and accurate.

1   111.   The method of Claim 106 wherein the flag of the resolution reply packet

2   comprises at least one of a station type specifying whether the source station is a router or a

3   host, a destination value specifying that an association of information between the destination

4   and source stations is guaranteed stable within the holding time, a uniqueness value

5   specifying that only a CIE matching the parameters and having the same uniqueness value is

6   included in the reply packet, and a guarantee value specifying that a binding of the

7   information is guaranteed stable and accurate.

1   112.   The method of Claim 106 wherein the flag of the registration request packet

2   comprises at least a uniqueness value specifying that a registration of the information is

3   unique.

1   113.   The method of Claim 98 wherein the extension part comprises at least an

2   extension type-length-value (TLV) triplet.

1   114.   The method of Claim 113 wherein the extension TLV triplet in the protocol

2   packet contains information regarding one of an internetwork layer address of a station, an

3   internet protocol (IP) address of the destination station, an availability of an upper layer

4   protocol resource, and an instance of an upper layer protocol resource.

1   115.   The method of Claim 114 wherein the extension TLV triplet comprises at

2   least one of a compulsory value specifying if the extension part is ignored, an extension type

3   specifying an extension protocol being used, an extension value specifying an extension

4   information, and an extension length specifying a length of an extension value.

1   116.   The method of Claim 114 wherein the extension part is terminated by an end-

2   of-extension TLV triplet.

1   117.   The method of Claim 114 wherein the extension TLV triplet contains vendor

2   private information including a vendor identification.

1   118.   A system comprising:

2   a server operating in a non broadcast multiple access network (NBMA), the server

3   having a cache containing information on a destination station;

4 a source station coupled to the server via a connection to obtain the information, the

5 source station transmitting a request packet to the server, the request packet having

6 parameters relating to the information; and

7 wherein the server transmits a reply packet containing the information to the source

8 station, the reply packet matching the parameters of the request packet.

1 119. The system of Claim 118 wherein the information comprises an internetwork

2 layer address of the destination station.

1 120. The system of Claim 118 wherein the information comprises an instance of a

2 resource information.

1 121. The system of Claim 120 wherein the resource information comprises a

2 resource availability and an upper layer address information.

1 122. The system of Claim 119 wherein the source station comprises:

2 a source cache to cache the address, the address being inserted in a data packet, the

3 data packet being forwarded to the destination station.

1 123. The system of Claim 119 wherein the request packet and the reply packet are

2 instances of a protocol packet.

1 124. The system of Claim 123 wherein the protocol packet comprises a fixed part

2 and a mandatory part.

1 125. The system of Claim 123 wherein the protocol packet further comprises an

2 extensions part.

1 126. The system of Claim 125 wherein the fixed part comprises at least one of a

2 type field specifying a packet type and an extension offset field specifying if the extension

3 part exists and a location of the extension part if the extension part exists.

1   127.   The system of Claim 126 wherein the fixed part further comprises at least one

2   of a link layer address field specifying a type of link layer addresses being carried, a protocol

3   field specifying a protocol being used, a packet length field specifying a length of the

4   protocol packet, a checksum field specifying a checksum value, a version field specifying a

5   version of the protocol, a type and length of source address field specifying a type and length

6   of a source NBMA address, and a type and length of source subaddress field specifying a type

7   and length of a source NBMA subaddress.

1   128.   The system of Claim 126 wherein the mandatory part comprises a common

2   header.

1   129.   The system of Claim 128 wherein the mandatory part further comprises at

2   least a client information entry (CIE).

1   130.   The system of Claim 128 wherein the common header comprises at least one

2   of a flag field specifying a flag and a request identification (ID) field specifying a request ID.

1   131.   The system of Claim 130 wherein the packet type is one of a resolution

2   request type, a resolution reply type, a registration request type, and a registration reply type,

3   the request packet being one of a resolution request packet and a registration request packet,

4   the resolution and the registration request packets corresponding to the resolution and

5   registration request types, respectively, and the reply packet being one of a resolution reply

6   packet and a registration reply packet, the resolution and the registration reply packets

7   corresponding to the resolution and registration reply types, respectively.

1   132.   The system of Claim 130 wherein the common header further comprises at

2   least one of a source NBMA address field specifying the source NBMA address, a source

3   NBMA subaddress field specifying the source NBMA subaddress, a source protocol address

4   field specifying a source protocol address of the source station, and a destination protocol

5   address field specifying a destination protocol address of one of the destination station and

6   the server.

1   133.   The system of Claim 129 wherein the CIE comprises at least one of a code

2   field specifying an acknowledgment of the request packet in the reply packet, a maximum

3   transmission unit field specifying a maximum transmission unit and a holding time field

4   specifying a holding time for which data in the CIE are valid.

1   134.   The system of Claim 133 wherein the CIE further comprises at least one of a

2   client address time and length field specifying a time and length of a client address

3   interpreted by the link layer address field in the fixed part, a client subaddress time and length

4   field specifying a time and length of a client subaddress interpreted by the link layer address

5   field in the fixed part, a client NBMA address field specifying a client NBMA address, a

6   client NBMA subaddress field specifying a client NBMA subaddress, and a client protocol

7   address field specifying a client internetworking layer address.

1   135.   The system of Claim 131 wherein the flag of the resolution request packet

2   comprises at least one of a station type specifying whether the source station is a router or a

3   host, a uniqueness value specifying that only a CIE matching the parameters and having the

4   same uniqueness value is included in the reply packet, and a guarantee value specifying that a

5   binding of the information is guaranteed stable and accurate.

1   136.   The system of Claim 131 wherein the flag of the resolution reply packet

2   comprises at least one of a station type specifying whether the source station is a router or a

3   host, a destination value specifying that an association of information between the destination

4   and source stations is guaranteed stable within the holding time, a uniqueness value

5   specifying that only a CIE matching the parameters and having the same uniqueness value is

6   included in the reply packet, and a guarantee value specifying that a binding of the

7   information is guaranteed stable and accurate.

1   137.   The system of Claim 131 wherein the flag of the registration request packet

2   comprises at least a uniqueness value specifying that a registration of the information is

3   unique.

1   138.   The system of Claim 125 wherein the extension part comprises at least an

2   extension type-length-value (TLV) triplet.

1   139.   The system of Claim 125 wherein the extension TLV triplet in the protocol

2   packet contains information regarding one of an internetwork layer address of a station, an

3   internet protocol (IP) address of the destination station, an availability of an upper layer

4   protocol resource, and an instance of an upper layer protocol resource.

1   140.   The system of Claim 139 wherein the extension TLV triplet comprises at least

2   one of a compulsory value specifying if the extension part is ignored, an extension type

3   specifying an extension protocol being used, an extension value specifying an extension

4   information, and an extension length specifying a length of an extension value.

1   141.   The system of Claim 139 wherein the extension part is terminated by an end-

2   of-extension TLV triplet.

1   142.   The system of Claim 139 wherein the extension TLV triplet contains vendor

2   private information including a vendor identification.